

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Status of Claims:

No claims are currently being canceled.

Claims 8, 14, 20, 21, 24, 26, 29, 30, 32 and 33 are currently being amended.

No claims are currently being added.

This amendment and reply amends claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 8-24 and 26-34 are pending in this application.

Comment Re: Priority:

It is noted that page 2 of the Office Action states that “the divisional application should set forth the portion of the earlier disclosure that is germane to the invention as claimed in the divisional application.” In reply, please refer to the restriction Office Action that was issued by the PTO in parent application 09/541,889, in which the Examiner grouped the claims into two groups, Group I (claims 1-7, 25, 35 and 36), which were examined in the parent application, and Group II (claims 8-24 and 26-34), which are being examined in this divisional application. Please note that the claims of Group I are directed to a communication system having plural terminals, while the claims of Group II are directed to a specific terminal. In that regard, the entire Detailed Description portion of the specification is pertinent to the features of Group II (see, for example, Figure 4 and the description of that figure in the specification).

Claim Objections:

In the Office Action, claims 14, 20, 24, 30 and 33 were objected to because of minor informalities noted on page 3 of the Office Action. By way of this amendment and reply, those “objected to” claims have been amended based on the comments made in the Office Action, whereby claims 14, 20, 24, 30 and 33 are now unobjectionable.

Claim Rejections – 35 U.S.C. § 112, 2nd Paragraph:

In the Office Action, claims 29-31 were rejected under 35 U.S.C. § 112, 2nd Paragraph, as being indefinite, for the reasons set forth on pages 3 and 4 of the Office Action. By way of this amendment and reply, claim 29 has been amended based on the comments made in the Office Action with respect to that claim, whereby claims 29-31 are now believed to fully comply with 35 U.S.C. § 112, 2nd Paragraph.

Claim Rejections – Double Patenting:

In the Office Action, claims 10, 23, 26, 29 and 32 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5 and 8 of copending Application No. 11/030,061. Applicants respectfully request deferral of this double patenting rejection until allowance of the copending application is made by the PTO, at which time this double patenting rejection will be addressed. Please note that the claims of copending Application No. 11/030,061 may well be amended at some later point in time, and thus it is believed that addressing this rejection now, prior to indication of allowable subject matter in this application and in copending Application No. 11/030,061, is pre-mature.

Claim Rejections – 35 U.S.C. § 103(a):

In the Office Action, claims 8 and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,393,032 to Ikegami; claims 8-24, 26, 27 and 29-34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,484,028 to Okada et al. in view of U.S. Patent No. 5,706,428 to Boer et al.; and claim 28 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Okada et al. in view of Boer et al. and further in view of U.S. Patent Publication No. 2005/022311 to Hanson. These rejections are traversed with respect to the presently pending claims, for at least the reasons given below.

The presently claimed invention is directed to a terminal device that can receive data transfers as a receiving node in a first network, even when the terminal device has a first network interface through which only reception is possible and a second network interface through which both transmission and reception are possible.

More specifically, as described in the specification, a radio terminal device uses a 2.4 GHz band radio network and a 5 GHz band radio network, for example, where the radio terminal device only has a reception function for the 5 GHz band radio network but is still

capable of carrying out the authentication/admission processing in the 5 GHz band radio network and/or the AV control protocol processing with respect to a node on the IEEE 1394 bus by utilizing the 2.4 GHz band radio network, while carrying out actual data transfer using the 5 GHz band radio network.

Based on the above, a terminal device (a radio terminal, for example) which is capable of packet transmission and reception in the second network but which is capable only of packet reception in the first network can carry out a procedure necessary in receiving data through the first network by utilizing the second network. Thus, the terminal device can be effectively utilized as a packet receiving node in the first network without transmitting any packet to the first network from the terminal device (that is, without requiring a packet transmission function with respect to the first network in this terminal device).

Namely, even when the radio terminal has only a reception function with respect to the 5 GHz band radio LAN, the authentication/admission processing in the 5 GHz band radio LAN or the AV control protocol between the radio terminal and the node on the IEEE 1394 bus can be carried out via the 2.4 GHz band radio LAN, and the actual data transfer can be carried out via the 5 GHz band radio LAN, so that the video data on the IEEE 1394 bus can be received through the 5 GHz band radio interface.

Therefore, it is possible to reduce the cost of the radio terminal. In particular, by providing only a reception function among the radio communication function, and utilizing an inexpensive radio system for the bidirectional communications, it is possible to reduce the number of expensive radio components that are required in the terminal, and thereby reduce the cost of the terminal. Note that the video information utilization in a home is mostly in a form of receiving/displaying video transmitted by a TV or satellite broadcast for the purpose of watching broadcast programs. This implies that the most users are likely to only receive the video information and to rarely transmit any video information. In view of this fact, it is effective to provide only a reception function in the terminal in order to realize wider spread of the 5 GHz band radio function to many homes at low cost. Thus, by providing only a reception function as an expensive radio function such as the 5 GHz band radio function while also providing a transmission function using another inexpensive radio function such as the 2.4 GHz band radio function, it is possible to provide radio terminals that can receive wideband image data and that can be easily accepted in the home environment.

In contrast, Ikegami describes a wireless LAN system which can make it possible to establish wireless channel connection and carry out high-rate data transfer through individual modems, and further can solve the above-mentioned problem of a hidden wireless terminal which starts data transmission through a wireless channel while other wireless terminals are making data transmission through the same wireless channel, and interferes with normal data receipt by the other wireless terminals, when high-rate data transfer is to be carried out in an IEEE 802.11-standardized wireless LAN network area.

In Ikegami, a wireless terminal 10 acts as both a data transmitter and a data receiver. In the system of Ikegami, an “RTS frame” from a “transmitter wireless terminal (the wireless terminal 10)” is transmitted to a “receiver wireless terminal” through the “standardized wireless LAN modem 12”. Then, a “CTS frame” from the “receiver wireless terminal” is transmitted to the “transmitter wireless terminal” through the “standardized wireless LAN modem 12”. After the “transmitter wireless terminal” has received “CTS frame”, “data frame” from the “transmitter wireless terminal” is transmitted to the “receiver wireless terminal” through the “high-rate data transfer modem 11”. An “ACK frame” which is transmitted from the “receiver wireless terminal” in response to the thus transmitted “data frame” is transmitted to the “transmitter wireless terminal” through the “high-rate data transfer modem 11” (col. 5, line 21 - col. 6, line 3 for “a transmitter” and col. 6, lines 4-40 for “a receiver”).

As is clear from the above, Ikegami fails to disclose or suggest the features of claim 8 in which “the terminal device transmits a prescribed information to the first network on behalf of the another terminal, the prescribed information being an information to be transmitted to the first network by the another terminal”. Similar arguments also apply to independent claim 21.

Further, an “RTS frame” of Ikegami is one which the “transmitter wireless terminal” voluntarily transmits, but is not one which is transmitted in response to a request from the “receiver wireless terminal”. That is, in Ikegami, transmitting an “RTS frame” from the “transmitter wireless terminal” is the beginning of a series of processing. However, in the presently claimed invention, the beginning of a series of processing is from the “another terminal” (e.g., see claim 8). See also the “terminal device” recited in claim 21. Here, modification of a series of processing of Ikegami destroys the capability of Ikegami’s system to properly handle data. Accordingly, Ikegami does not disclose or suggest certain features of

claims 8 or 21 as discussed in detail above. In certain respects, Ikegami actually teaches away from the presently claimed invention.

Furthermore, in Ikegami, the “high-rate data transfer modem 11” of the “receiver wireless terminal” has a function to transfer data as well as to receive data. However, in the presently claimed invention, the “another terminal” (claim 8) or the “terminal device” (claim 21) has only a function to receive data with respect to the first network. Accordingly, the present invention according to claims 8 and 21 are completely different from Ikegami in configuration and in operation. Also, the system of Ikegami employs a “receiver wireless terminal” that comprises a “high-rate data transfer modem 11” having a function to transfer data, which operates much different from the presently claimed invention.

Accordingly, independent claims 8 and 21 are patentable over Ikegami.

With respect to independent claims 8, 21, 26, 29, and 32, in Okada, a “satellite network” is a one-way transmission, and thus there is inherently no information that the “terminal 1” (referred to in the Office Action as corresponding to “another terminal” of claim 8) should transmit to the “satellite network”. Accordingly, Okada fails to teach or suggest a feature in that the “center 3” (corresponding to the “terminal device” of claim 8) transmits a prescribed information to the first network on behalf of the “terminal 1” (corresponding to the “another terminal” of claim 8), the prescribed information being an information to be transmitted to the first network by the “terminal 1”. Accordingly, Okada fails to teach or suggest the features of claim 8 in which “the terminal device transmits a prescribed information to the first network on behalf of the another terminal, the prescribed information being an information to be transmitted to the first network by the another terminal”.

Similar arguments also apply to independent claims 21, 26, 29, and 32.

Accordingly, since none of the other cited art of record rectifies the above-mentioned deficiencies of Okada, independent claims 8, 21, 26, 29, and 32 are patentable over the cited art of record.

Still further, with respect to dependent claim 12, three different elements: a “terminal device”, an “another terminal”, and a “source terminal” are recited, whereby the “source terminal” transmits packets through the “first network”. Here, the “first network” is identical to the network which the “another terminal” uses for receiving packets.

In contrast, in Okada, the “terminal 5” referred to in the Office Action as the “source terminal” of claim 12 is not connected to the “satellite network” referred to in the Office Action as the “first network”, but rather it is connected to the “Internet” instead (see Fig. 3 and column 6, lines 45-47 of Okada). Thus, Okada discloses that the “terminal 5” is connected to the “center 3” via the Internet 4, but does not disclose or suggest that the “terminal 5” is connected to the “satellite network 6, 7”. That is, the “terminal 5” does not have a function to transmit and receive data to and from the “satellite network 6, 7”. Accordingly, the “terminal 5” of Okada cannot correspond to the “source terminal” having a function to transmit packets through the “first network”. Therefore, Okada does not teach or suggest the above-discussed features of claim 12, whereby the other cited art of record does not rectify these deficiencies of Okada.

Accordingly, dependent claim 12 is patentable for these additional reasons.

Conclusion:

Since all of the issues raised in the Office Action have been addressed in this Amendment and Reply, Applicants believe that the present application is now in condition for allowance, and an early indication of allowance is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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